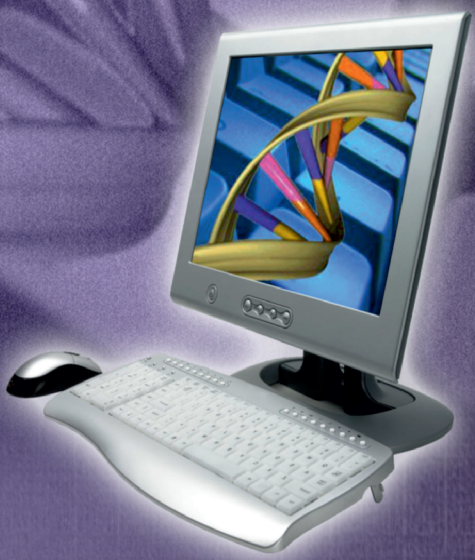
AGRO-INFORMATICS



G. VANITHA & M. KALPANA

AGRO-INFORMATICS

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Tamil Nadu Agricultural University

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TAMIL NADU, INDIA

Foreword

Tamil Nadu Agricultural University is the first to introduce Information' Technology in the field of Agriculture. The application of Information Technology in day to day activities becomes part and parcel of our routine. The application of Information Technology in the biological streams like Agriculture, Medicine and Veterinary Science has been given impetus and many of the Universities in India have made Information Technology, a compulsory subject even at under graduate level, mainly to make the life sciences dynamic and application oriented.

In this context, teaching the students with this resource material is very vital. The available resource materials support the students for self learning. The content is very simple, interesting, self explanatory and easy to follow and comprehend the subject thoroughly.

The book covers the diverse areas ranging from artificial intelligence, artificial neural networks, decision support system, expert system, geographic information system, information system related to agriculture, genetic algorithm, programming language with backend tool to develop softwares.

Under this context, the book **"Agro-Informatics"** written by Mrs. G. Vanitha, Assistant Professor of Computer Science, and Mrs. M. Kalpana, Assistant Professor of Computer Science working in the Department of Physical Sciences & Information Technology are highly appropriate, timely and relevant.

On the whole the book is well written and provides many new insights. The authors deserve appreciation for bringing out a valuable book encompassing all the essential issues and subjects of Agroinformatics. The authors certainly have to be complemented for their effort.

(P. Murugesa Boopathi)

Preface

Agroinformatics allows us to cope with the information deluge in the agriculture sector in increasingly efficient and effective ways. Agroinformatics is basically a multidisciplinary subject which covers a wide spectrum of Agricultural issues and it generally draws the concepts and methods of Computer Science. It brings the application in agriculture with innovative ideas, techniques and scientific knowledge to expand the horizons of the Computer Science.

The book contains the details about the information technology applied to management and analysis of agricultural data. The book covers the diverse areas ranging from artificial intelligence, artificial neural networks, decision support system, expert system, geographic information system, information system related to agriculture, genetic algorithm, programming language with backend tool to develop softwares. The book contains fifteen chapters that highlight and discuss the various dimensions of Agroinformatics**.**

It is hoped that the book will provide the basic and fundamental knowledge of understanding the concepts of Bioinformatics. This book is prepared, taking into consideration the changing needs of the undergraduate curricula of various universities involved in offering courses on Agroinformatics. The book will also be a guide for the researchers. The book would also provide the required computer knowledge to the students of State Agricultural Universities and other ICAR Institutions to sharpen their understanding of Agroinformatics.

G.Vanitha
M.Kalpana

Acknowledgement

We take this opportunity to thank our Vice Chancellor, Dr. P.Murugesa Boopathi, Tamil Nadu Agricultural University, Coimbatore for having provided the necessary working atmosphere, conductive environment and permission to bring out this valuable edition.

We would like to express our heartiest thanks to Dr. S. Santhana Bosu, Dean (Engg) for his continuous encouragement and well wishes.

We wish to express our regards to Dr. R. Palanisamy, Professor & Head, Department of Physical Sciences & Information Technology for his cooperation to bring this publication in time.

We would like to thank all those individuals who have directly or indirectly contributed their time and energy to bring this edition successfully.

We thank New India Publishing Agency (New Delhi) for their efforts in bringing out this book in record time.

We invite suggestions and critical comments from the reader for further improvement and refinement of this book.

G.Vanitha
M.Kalpana

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Agro-Informatics

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